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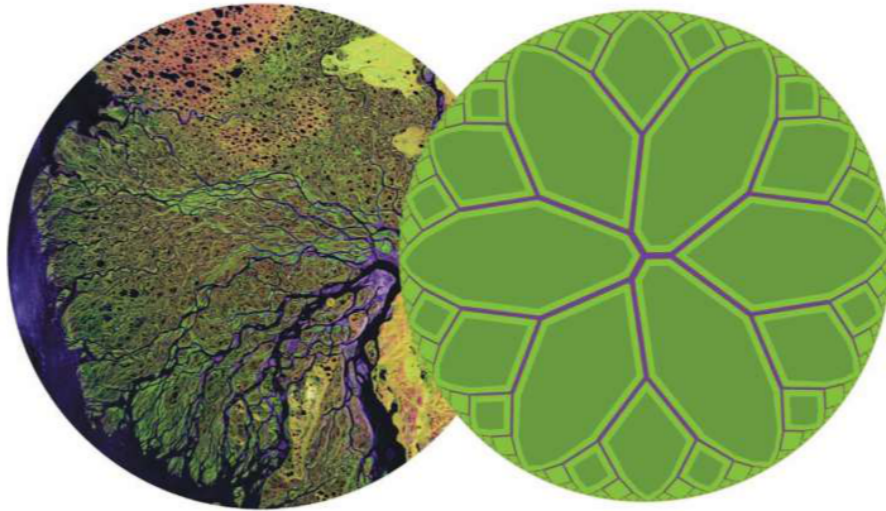
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Lines and curves and a homage to Leonardo

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Abstract

Leonardo da Vinci's drawing of a human figure placed in the center of both a circle and a square continues to captivate the imagination of countless people. The idea for this arrangement dates back to Vitruvius, a Roman architect who stated that the human body can harmonize with straight-lined architecture as much as it does with round-shaped theaters, arches, or domes. Today, lines and curves have gained a much broader meaning. Lines stand for linear mathematics, while curves symbolize nonlinearity. This opens up a whole new range of perspectives. Lines can be used to describe creativity. Curves stand for play. Lines stand for evolution. Curves stand for revolution. Lines are used to represent vectors. Curves symbolize interplay between opposite forces and freedom to change direction. In this essay, I argue that when we look at the world that surrounds us today, we must almost necessarily look at it in two different ways that reveal two different perceptions: We see linearity and nonlinearity. Perhaps, if we were to translate this two-sided perception of the world back into Leonardo's graphical language, we would draw a human figure, as a symbol for ourselves, and we would place it in the center of both a square and a circle. We could let the straight lines of the square symbolize motion, creativity, and evolution, while the circle could stand in for freedom, revolution, and play. Like Leonardo's drawing, the constructal law, which is the topic of this conference, unites linear and nonlinear phenomena into one joint statement about the world that surrounds us.

Keywords: Art and Science, Leonardo da Vinci, Vitruvian Man, Creativity, Play.

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